Slinky computations in Maple

> *Digits* := 4;

      #no way will our experimental results be accurate to more than a couple of percent

$$Digits := 4 \tag{1}$$

> *m* := .225; *#mass in kilograms*

    $mperloop := \dfrac{m}{89};$ *#slinky has 89 loops*

    g := 9.8 *# acceleration of gravity in mks units*

$$m := 0.225$$
$$mperloop := 0.002528$$
$$g := 9.8 \tag{2}$$

> *T* := .2·*g*; *#approx force of gravity on 79 of the links*

$$T := 1.96 \tag{3}$$

> *l* := .0315; *#separation of one loop experiencing T;*

    L := *l*·87; *#number of loops we will use;*

    Lenglish := *L*·39.37; *#length in inches*

    $rho := \dfrac{mperloop}{l};$ *#density*

$$l := 0.0315$$
$$L := 2.740$$
$$Lenglish := 107.9$$
$$\rho := 0.08025 \tag{4}$$

> $c := \mathrm{sqrt}\left(\dfrac{T}{rho}\right);$ *#theoretical wave speed*

$$c := 4.942 \tag{5}$$

> $P := \dfrac{2 \cdot L}{c};$ *#theoretical period in seconds*

$$P := 1.109 \tag{6}$$

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